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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,527	09/23/2004	Robert L. Thornton	ST 2626.04 US	5526
22887 7590 02/21/2007 DISCOVISION ASSOCIATES 2265 E. 220TH STREET LONG BEACH, CA 90810			EXAMINER CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/711,527		THORNTON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Tianjie Chen		2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

Art Unit: 2627

## ***NON-Final Rejection***

### ***Election/Restrictions***

1. Applicant's election without traverse of group III with claims 13-20 in the reply filed on 11/22/2006 is acknowledged.

### ***Claim Objections***

2. Claim 20 is objected to because of the following informalities:

In claim 20, line 1; "comprises" should be changed to --comprise--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oumi et al (WO 99/59149 with English equivalent US 7,057,998). In the following rejection, the citation will be taken from English equivalent) in view of Awano et al (US 6,657,927).

Claim 13, Oumi et al shows an apparatus comprising a single device in Fig. 3 including an aerodynamic slider 1 (Column 5, line 9) and at least one light emitting element 2 (Column 5, line 27) wherein the light emitting element includes an aperture 7 in an emission facet, the device being mounted on a read/write arms via a suspension mechanism (Column 5, lines 9-11), the device being used to read and write on an optical media.

Art Unit: 2627

Oumi et al does not particularly point out that the light emitting element is a laser and does not specify the manner to form the device.

Awano et al shows a similar device, wherein the light emitting element 1 is a laser (Column 8, line 24) and the device is formed in a monolithic manner (Column 2, lines 59-61). Oumi et al discloses element 2 is a light emitting element but does not specify it. Awano et al discloses a light emitting element, which is a laser; and it is also well known in the art that the most commonly used light emitting element in an optical head is laser. One of ordinary skill in the art would have been reasonably expect that in Oumi et al device, the light emitting element is a laser. Awano et al also teaches that using monolithic manner for forming the device, it is possible to realize the head having a miniaturized size and light weight (Column 2, lines 62-64). One of ordinary skill in the art would have been motivated to apply monolithic manner to form the device.

Claim 14, Oumi et al further shows that a width "w" of the aperture is of smaller dimension than an output wavelength  $\lambda$  of the laser (Column 5, lines 40-41).

Claim 15, Oumi et al; shows that a reflective read/write surface of optical media during a read/write operation is positioned at an optical path-length of few tens of nm from the emission facet (Column 5, lines 45-47), which is less than the output wavelength  $\lambda$ , which is about 600nm.

4. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oumi et al in view of Awano et al as applied to claim 13; further in view of Horie et al (US 6,115,353).

Claim 16, Oumi et al shows the device is used for recording and reproducing information from n optical medium, but does not show the optical medium.

Art Unit: 2627

Horie shows an optical media comprises "phase change" media and teaches that this medium exhibits a reduced degradation during repeated overwriting (Column 1, lines 12-15). One of ordinary skill in the art would have been motivated to apply Horie et al's optical medium with Oumi et al's device for being able to do repeated overwriting.

Claim 17, Horie shows that the "phase change" media includes GeTeSb materials (Column 21, lines 49-51).

Claim 18, Horie et al shows that media includes a phase change layer 15 positioned between a protective overcoat 16 and a substrate 13 (Column 6, lines 2-8).

5. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oumi et al in view of Awano et al as applied to claim 13; further in view of Horie et al (US 6,115,353) and Fujita et al (US 6,171,150).

Claim 19, Horie et al shows that the optical media includes, a first dielectric layer 18, a phase change layer 15, a second dielectric layer 16, a metal layer 17, a third dielectric layer 14, and a base or substrate 13 (Column 6, lines 2-8).

Horie et al does not show an outer overcoat of diamond-like carbon.

Fujita et al shows an optical medium, which includes a first dielectric layer 31, second dielectric layer 14, and third dielectric layer 12; and further having an outer overcoat of diamond-like carbon 17 (Column 3, line 7). Fujita teaches that the DLC protective layer can suppress impact on the recording layer, even if the magnetic field modulation head is contacted with the disc under external impact, thus protecting the recording layer (Column 3, lines 26-29). One of ordinary skill in the art would have been motivated to add the DLC layer for protecting the recording layer.

Claim 20, Horie et al further shows that the dielectric layers comprise ZnS:SiO<sub>2</sub> (Column 22, lines 65).

Art Unit: 2627

**Conclusion**

6. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
TIANJIE CHEN  
PRIMARY EXAMINER